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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,533	10/12/2000	Motoshi Ito	YAMAP0741US	9029

7590 11/12/2004

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EXAMINER	
LI, ZHUO H	

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/689,533	ITO ET AL.	
	Examiner	Art Unit	
	Zhuo H Li	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,23-25 and 27-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21,23-25 and 27-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the amendment filed 8/19/2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-6, 8-21, 23-25 and 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US PAT. 5,963,970) in view of Warren et al. (US PAT. 5,963,909 hereinafter Warren).

Regarding claim 1, Davis discloses an apparatus for keeping track of erase cycles performed on a plurality of storage blocks in a flash memory comprising the non-volatile memory (10, figure 1), at least one WORD (20, figure 1) of a non-volatile memory, each WORD including a plurality of bits (col. 2 lines 56-63) and information can be erase from the non-volatile memory in a unit of sector, each sector including a plurality of WORDs, and wherein the non-volatile memory comprises an information storage area including at least one WORD in a first sector of the non-volatile memory (col. 4 lines 10-27), and a microprocessor (105, figure 2) for writing pieces of information in a predetermined order in the WORDs of the information storage area (col. 3 line 31 through col. 4 line 9). Davis differs from the claimed invention in not specifically teaching for reading out a last piece of information which has been written in the at least one WORD of the information storage area within a predetermined permitted update count. However, Warren teaches a multi-media copy management system having control tag information so that the data information, which has been written in the information storage area, is prohibited to be read out when the control tag information is above a threshold value (abstract, col. 2 lines 3-16 and col. 5 line 33 through col. 7 line 47), in order to control the reproduction of a multi-media data signal which is stored on a source media. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Davis in reading out a last piece of information which has been written in the at least one WORD of the information storage area within a predetermined permitted update count, as per teaching of Warren, in order to control the reproduction of the multi-media data signal which is stored on a source media.

Regarding claim 2, Davis discloses to erase all of the bits of all of the WORDs in the sector including the information storage area (col. 3 lines 6-12).

Regarding claim 3, Davis discloses to set all the bits of all of the WORDs in each sector to "1" (figure 4 and col. 4 line 42 through col. 5 line 52).

Regarding claim 4, Davis teaches to provide the information storage area in a same sector as an initialization operation program which is a first program to be executed after a reset (figure 3 and col. 4 lines 10-41).

Regarding claim 5, Davis discloses the predetermined order is an ascending order to the address of the WORDs (figure 1).

Regarding claim 6, Warren discloses an upper limit value if the predetermined permitted update count being determined based on the number of WORDs in the information storage area (col. 5 line 66 through col. 6 line 57).

Regarding claims 8-9, Davis teaches to set to a CLEAR state for an erase operation (col. 4 line 66 through col. 5 line 20) so that it recognizes to write at least one write one or more of the plurality of bit in the at least one WORDs from "1" to "0", and the WORDs in the information storage area being searched through in the predetermined order (figure 1-3 and col.4 lines 13-15). Although Davis does not specifically teaching to read out as the last piece of information, which has been written in the information storage area within the predetermined permitted update count, a last hit WORD found in a search through the information storage area for WORDs in which at least one bit is "0", and Warren teaches a multi-media copy management system having control tag information so that the data information, which has been written in the information storage area, is prohibited to be read out when the control tag information is above a

threshold value (abstract, col. 2 lines 3-16 and col. 5 line 33 through col. 7 line 47). Therefore, one of ordinary skill in the art at the time the invention was made to modify Davis in reading out a last piece of information which has been written in the at least one WORD of the information storage area within a predetermined permitted update count, as per teaching of Warren, in order to control the reproduction of the multi-media data signal which is stored on a source media.

Regarding claim 10, Warren teaches to store the number of times information has been written in the information storage area in an update count storage (abstract and col. 5 lines 60-63).

Regarding claim 11, the limitations of the claim are rejected as the same reasons set forth in claim 4.

Regarding claim 12, the limitations of the claim are rejected as the same reasons set forth in claim 1.

Regarding claim 13, Davis teaches the first sector including a first program to be executed by the microprocessor unit (figure 3 and col. 4 lines 10-41).

Regarding claim 14, the limitations of the claim are rejected as the same reasons set forth in claim 5.

Regarding claim 15, the limitations of the claim are rejected as the same reasons set forth in claim 6.

Regarding claim 16, the limitations of the claim are rejected as the same reasons set forth in claim 7.

Regarding claims 17-18, the limitations of the claim are rejected as the same reasons set forth in claims 8-9.

Regarding claim 19, the limitations of the claim are rejected as the same reasons set forth in claim 10.

Regarding claim 20, the limitations of the claim are rejected as the same reasons set forth in claim 4.

Regarding claim 21, the limitations of the claim are rejected as the same reasons set forth in claim 1. In addition, Davis teaches to provide the information storage area in a same sector as an initialization operation program, which is a first program to be executed after a reset (figure 3 and col. 4 lines 10-41).

Regarding claims 23-24, Warren teaches to read out contents usage count as the number of remaining times or as the number of times the content can be used (col. 10 line 49 through col. 11 line 21).

Regarding claim 25, the limitations of the claim are rejected as the same reasons set forth in claim 1. In addition, Davis teaches the first sector of the non-volatile nmemory including a first program to be executed by the microprocessor unit (figure 2 and col. 3 line 59 through col. 4 line 9).

Regarding claim 27-28, the limitations of the claim are rejected as the same reasons set forth in claims 23-24.

Regarding claim 29, Regarding claim 1, Davis discloses an apparatus for keeping track of erase cycles performed on a plurality of storage blocks in a flash memory comprising the non-volatile memory (10, figure 1), at least one WORD (20, figure 1) of a non-volatile memory, each WORD including a plurality of bits (col. 2 lines 56-63) and information can be erase from the non-volatile memory in a unit of sector, each sector including a plurality of WORDs, and

wherein the non-volatile memory comprises an information storage area including at least one WORD in a first sector of the non-volatile memory (col. 4 lines 10-27), and a microprocessor (105, figure 2) for writing pieces of information in a predetermined order in the WORDs of the information storage area (col. 3 line 31 through col. 4 line 9), wherein the non-volatile unit memory includes a boot area and a system area each including one or more sectors such that the boot area includes an information storage area including at least one WORD and a microprocessor unit initialization program for initializing the microprocessor unit (figure 3 and col. 3 line 59 through col. 4 line 41). Although Davis does not specifically teaching to read out as the last piece of information, which has been written in the information storage area within the predetermined permitted update count, a last hit WORD found in a search through the information storage area for WORDs in which at least one bit is "0", Warren teaches to count the number of times each block has been erased and reprogrammed, so that a last piece of information which has been written in a one block of the information storage area within a predetermined permitted update count is read out including a last hit WORD found in a search through the information storage area for WORDs in which at least one bit is "0" (figure 6 and col. 6 line 56 through col. 9 line 4), in order to control the reproduction of a multi-media data signal which is stored on a source media. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Davis in reading out a last piece of information which has been written in the at least one WORD of the information storage area within a predetermined permitted update count, as per teaching of Warren, because it controls the reproduction of a multi-media data signal which is stored on a source media.

Regarding claim 30, Davis teaches the memory having support softeware to control the setting within the information storage area (col. 3 line 64 through col. 4 line 3) so that the boot area obviously comprises a check program for checking contents of the information storage area.

Regarding claim 31, the limitations of the claim are rejected as the same reasons set forth in claim 4.

Regarding claim 32,Davis discloses the boot area further comprises I/F control means for receiving a program to be stored in the system area from an upper control unit which is connected to the information update count managing apparatus (figure 3).

Regarding claim 33, Davis discloses flash memory update means (245, figure 3) for updating a program in the system area.

Regarding claim 34, Warren teaches the microprocessor unit executes the microprocessor unit initialization program, and then waits for reception from the upper control unit, which is connected to the information update count managing apparatus immediately after the micro processor unit is reset (col. 5 lines 33-66).

Regarding claim 35, Davis discloses the microprocessor unit calls a program in the boot area from a grogram in the system area (col. 5 line 53 through col. 6 line 6).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US PAT. 5,963,970) in view of Warren et al. (US PAT. 5,963,909 hereinafter Warren) as applied to claims above, and further in view of Sawabe (US PAT. 6,122,434).

Regarding claim 7, the combination of Davis and Warren differs from the claimed invention in not specifically teaches the information update count managing method wherein the

pieces of information include regional information which is used for controlling a region where a content can be reproduced. However, Sawabe an information recording medium including regional information, which is used for controlling a region where content can be reproduced (col. 2 line 9 through col. 4 line 35). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Davis and Warren in having the pieces of information include regional information which is used for controlling a region where a content can be reproduced, as per teaching of Sawabe, because it makes user friendly by reproducing an identical disk in different ways according to predetermined levels which are set differently in various countries.

Response to Arguments

5. Applicant's arguments filed 8/19/2004 have been fully considered but they are not persuasive.

In response to applicant's request for clarification of references cited, Warren (US PAT. 5,963,909) is included in the Form PTO-892.

In response to applicant's argument that neither Davis nor Warren does not disclose "a read step of reading out a last piece of information which has been written in the information storage area within a predetermined permitted update count", it is noted that Warren clearly teaches the number of generations of SCT data which are detected on the media will inform the player/recorder of the number of copied media from which the particular media was derived, and then to control a further reproduction of the data of the media by comparing the generation number with a permitted threshold value (col. 5 line 50 through col. 6 line 5). Thus, one skill in

the art would recognize to reading out a last piece of information, i.e., data of the media, which has been written in the information storage area, when the generation number matches with the predetermined threshold, so that reading out the last piece of information within a predetermined permitted update count. Thus, the combination of Davis and Warren teaches the claimed limitations.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Davis and Warren are combinable because they both related to a memory system operating in a mass storage device, i.e., a CD ROM player, CD recordable player or digital video disk player. The motivation of combining Warren with Davis is to control the reproduction of a multi-media data signal that is stored on a source media by allowing a limited number of copies.

In response to applicant's argument that Warren is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Davis and Warren are combinable because they are in the same field of endeavor, i.e., both Davis and Warren are related to a

memory system operating in a mass storage device, i.e., a CD ROM player, CD recordable player or digital video disk player.

In response to applicant's argument that Davis does not teach or suggest a content usage count storage area of the non-volatile memory in a sector which includes a first program to be executed after a reset, it is noted that Davis clearly discloses storage flash block reserved for erase count value and an update circuit, perhaps support software, modifying the wear-bar block for updating the erase count value at a proper time (col. 4 lines 22-41) so that one skill in the art would recognize a content erase count storage area of the non-volatile memory in wear-bar section including a first program to be executed after the reset. Although it is corrected that Davis does not specifically teach the content count storage being a count of number of plays and copies made, such limitations are clearly taught by Warren (col. 5 line 50 through col. 6 line 5). Thus, the combination of Davis and Warren are enough to reject the claimed limitations.

In response to applicant's argument that Davis does not teach or suggest to provide the information storage area in a same sector as an initialization operation program to be executed after a reset, it is noted that Davis clearly discloses the information storage area in a same sector 220, figure 3), in which an update circuit, perhaps support software, modifying the wear-bar block at a proper time (col. 4 lines 22-41) so that one skill in the art would recognize the information storage area in the same sector as an initialization operation program to be executed after a reset. Thus, the claimed limitations are rejected by the combination of Davis and Warren.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhuo H. Li whose telephone number is 571-272-4183. The examiner can normally be reached on Tuesday to Friday from 9:30 a.m. to 7:00 p.m. The examiner can also be reached on alternate Monday

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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